

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,492	02/06/2002	Matthew Becker	SMQ-140/P6592	2261
959	7590	08/16/2004	EXAMINER	
LAHIVE & COCKFIELD, LLP. 28 STATE STREET BOSTON, MA 02109			BUEHL, BRETT J	
			ART UNIT	PAPER NUMBER
			2183	

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/007,492

Applicant(s)

BECKER, MATTHEW

Examiner

Brett J Buehl

Art Unit

2183

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/8/01, 2/6/02, 5/29/02, 6/20/02, 4/26/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/8/01 and 2/6/02 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/20/02</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-18 have been examined.

Papers Submitted

2. It is hereby acknowledged that the following papers have been received and placed on record in the file: Transmittal of New Application as received on 11/8/01, Declaration and Fees as received on 2/6/02, Affidavits as received on 5/29/02, IDS as received on 6/20/02, and Change of Power of Attorney as received on 4/26/04.

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
4. The applicant is requested to review the specification and update the status of all co-pending applications made mention of, replacing attorney docket numbers with current U.S. application or patent numbers when appropriate. References to U.S. applications or patents should make it clear as to what the number refers (e.g. U.S. Patent No. #), instead of listing only the number.
5. The title of the invention is not descriptive. The current title only states a general concept in the art and does not help to further identify the invention. A new title is required that is clearly indicative of the invention to which the claims are directed.

Art Unit: 2183

6. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP §608.01.

7. The use of the trademarks SUN MICROSYSTEMS, ADVANCED MICRO DEVICES, INTEL, MOTOROLA, INTERNATIONAL BUSINESS MACHINES, and TRANSMETA has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Drawings

8. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 36 in Fig. 3 (paragraph 19). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Art Unit: 2183

9. The drawings are objected to because:
- a. In Figure 6, reference block 102, the word “SPARE” should be replaced with the word “SPACE”.
 - b. Figures 3 and 4 are incomprehensible due to unaligned text. It is unclear to the examiner as to what the text reads. Both figures also contain floating reference numerals that have unclear meaning given their current positions. Appropriate action is required.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Double Patenting

10. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 1-18 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-18 of copending Application No. 10/100,101. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 2183

13. Claims 9-11 recite the limitation "wherein the step of asserting the stall comprises" in line 1 of each claim. There is insufficient antecedent basis for this limitation in the claim. Claim 5 does not explicitly state any steps. Therefore, claim 5 should be amended to read, "A method, comprising the steps of:", or claims 9-11 should be amended to read, "wherein asserting the stall comprises".

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Panwar, U.S. Patent No. 5,860,018.

16. Regarding claim 1, Panwar has taught a method, comprising: subtracting a current value of a pointer from a maximum value of the pointer (col. 9, lines 60-64), comparing to a desired value (col. 10, lines 1-3), and asserting a stall when the desired value is achieved (col. 10, lines 3-7). Panwar's tracking unit determines if there are unused resources by keeping track of the resources with a counter (pointer). It is implied that the number of resources needed to issue an instruction must be compared to this resource counter. It is common practice when comparing values to subtract one value from another and compare the result to zero, or to use equivalent comparison means such as using an incrementing counter in place of a decrementing counter (col. 9, lines 65-67),

Art Unit: 2183

therefore Panwar's determining means includes this and equivalent comparison methods in its scope.

15. Regarding claim 2, Panwar has taught a method of claim 1, further comprising initializing the desired value of the pointer (col. 9, lines 60-64).

16. Regarding claim 3, Panwar has taught a method of claim 1, further comprising initializing the desired value of the pointer to an integer value (col. 9, lines 60-64). Given the binary nature of Panwar's counter, it is inherent that the number it is initialized with be an integer.

17. Regarding claim 4, Panwar has taught a method of claim 1, further comprising initializing the desired value of the pointer to zero (col. 9, lines 64-67).

18. Regarding claim 5, Panwar has taught a method, comprising: advancing instructions along a pipeline, the pipeline having a minimum amount of open space, subtracting the minimum amount of open space from a current amount of open space within the pipeline (col. 9, lines 60-64), comparing to a desired value (col. 10, lines 1-3), and asserting a stall when the desired value is achieved (col. 10, lines 3-7). It is inherent that a pipeline advances instructions along for execution and that any instruction has a minimum number of resources required to execute. Panwar's tracking unit determines if there are unused resources by keeping track of the resources with a counter (pointer). It is implied that the number of resources needed to issue an instruction must be compared to the resource counter. It is common practice when comparing values to subtract one value from another and compare the result to zero, or to use equivalent comparison means such as using an incrementing counter in place of a decrementing counter (col. 9,

lines 65-67), therefore Panwar's determining means includes this and equivalent comparison methods in its scope.

19. Regarding claim 6, Panwar has taught a method according to claim 5, further comprising initializing the desired value (col. 9, lines 60-64).

20. Regarding claim 7, Panwar has taught a method according to claim 5, further comprising initializing the desired value to an integer value (col. 9, lines 60-64). Given the binary nature of Panwar's counter, it is inherent that the number it is initialized with be an integer.

21. Regarding claim 8, Panwar has taught a method according to claim 5, further comprising initializing the desired value to zero (col. 9, lines 64-67).

22. Regarding claim 14, Panwar has taught a method, comprising: advancing instructions along a staged pipeline, establishing a single pointer to indicate the amount of open space within the pipeline (col. 9, line 56), and asserting a stall condition when the single pointer indicates resources are limited (col. 10, lines 3-7). It is inherent that a pipeline advances instructions along for execution and that any instruction has a minimum number of resources required to execute. Panwar's tracking unit determines if there are unused resources by keeping track of the resources with a counter (pointer). It is implied that the number of resources needed to issue an instruction must be compared to the resource counter. It is common practice when comparing values to subtract one value from another and compare the result to zero, or to use equivalent comparison means such as using an incrementing counter in place of a decrementing counter (col. 9, lines 65-67), therefore Panwar's determining means includes this and equivalent comparison methods in its scope.

Art Unit: 2183

23. Regarding claim 15, Panwar has taught a method according to claim 14, further comprising establishing a minimum number of open spaces within the pipeline (col. 9, lines 58-67). The minimum number of spaces open in the pipeline would be inherent in the initialization of the resources available. Therefore, this limitation is within the scope of Panwar's live instruction counter initialization (see claim 14).

24. Regarding claim 16, Panwar has taught a method according to claim 14, wherein the minimum number of open spaces corresponds to the number of instruction per stage (col. 9, lines 58-67). The minimum number of spaces open in the pipeline would be inherent in the initialization of the resources available. Therefore, this limitation is within the scope of Panwar's live instruction counter initialization (see claim 14).

25. Regarding claim 17, Panwar has taught a method according to claim 14, further comprising establishing a maximum amount of open space within the pipeline (col. 9, lines 58-67). The maximum number of spaces open in the pipeline would be inherent in the initialization of the resources available. Therefore, this limitation is within the scope of Panwar's live instruction counter initialization (see claim 14).

Regarding claim 18, Panwar has taught a method according to claim 14, further comprising comparing the value of the single pointer to a desired value (col. 10, lines 1-3). The desired value in Panwar is the number of resources needed to issue the instruction.

Conclusion

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is reminded that in amending in response to a rejection

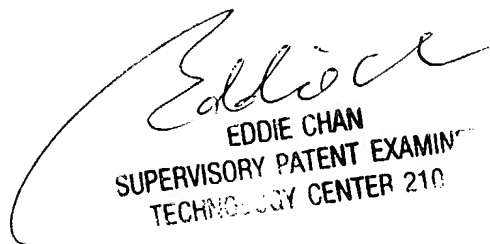
Art Unit: 2183

of claims, the patentable novelty must be clearly shown in view of the state of art disclosed by the references cited and the objections made. Applicant must show how the amendments avoid such references and objections. See 37 CFR 1.111(c).

27. Inquiries concerning this communication or earlier communications from the examiner should be directed to Brett J. Buchl who can be reached at (703) 305-4663 or <brett.buehl@uspto.gov>. The examiner can normally be reached between the hours 8:00am – 5:30pm (EST), Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Chan, can be reached at (703) 305-9712. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


EDDIE CHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 210